

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 January 2004 (29.01.2004)

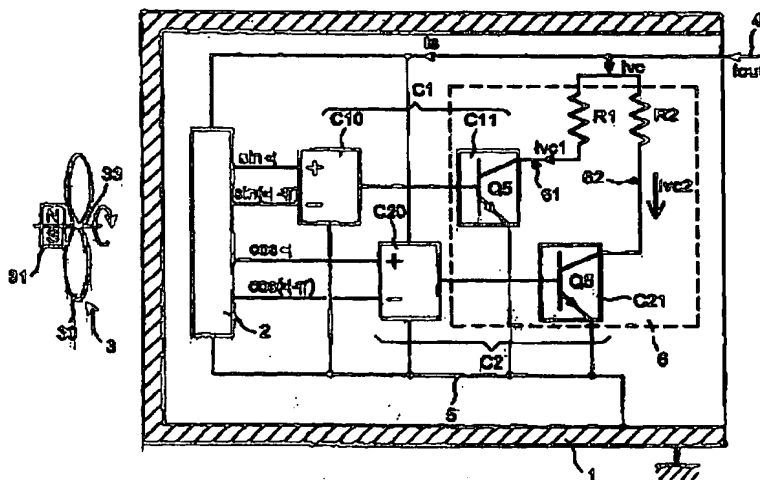
PCT

(10) International Publication Number
WO 2004/010089 A1

- (51) International Patent Classification⁷: G01F 1/15, 15/06, G01P 5/06, 3/48, 13/04, 3/487
- (21) International Application Number: PCT/EP2003/050262
- (22) International Filing Date: 25 June 2003 (25.06.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
02 09331 23 July 2002 (23.07.2002) FR
- (71) Applicant (for FR only): SERVICES PETROLIERS SCHLUMBERGER [FR/FR]; 42, rue Saint Dominique, F-75007 Paris (FR).
- (71) Applicant (for JP, NI, NL, RO only): SCHLUMBERGER HOLDINGS LIMITED [—/—]; P.O. Box 71, Craingmuir Chambers, Road Town, Tortola (VG).
- (71) Applicant (for CA, GB only): SCHLUMBERGER CANADA LIMITED [CA/CA]; 24th Floor - Monenco Place, 801 6th Avenue SW, Calgary, Alberta T2P 3W2 (CA).
- (71) Applicant (for BF, BJ, CF, CG, CI, CM, CZ, GA, GN, GQ, GW, IN, LT, MA, ML, MR, NE, SN, TD, TG, TN, VN only): PETROLEUM RESEARCH & DEVELOPMENT N.V. [NL/NL]; De Ruyterkade 26, Willemstad, Curacao (AN).
- (71) Applicant (for AE, AG, AL, AM, AT, AU, AZ, BA, BB, BE, BG, BR, BY, BZ, CH, CN, CO, CR, CU, CY, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GD, GE, GH, GM, GR, HR, HU, ID, IE, IL, IS, IT, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LU, LV, MC, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, SZ, TJ, TM, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW only): SCHLUMBERGER TECHNOLOGY B.V. [NL/NL]; Parkstraat 83-89, NL-2514 JG The Hague (NL).
- (71) Applicant (for CN only): SCHLUMBERGER OVERSEAS S.A. [PA/PA]; 8 Calle Aquilino de la Guardia, Panama City (PA).
- (71) Applicant (for OM, SD, TR only): SCHLUMBERGER OILFIELD ASSISTANCE LIMITED [PA/PA]; 8 Calle Aquilino de la Guardia, Panama City (PA).
- (71) Applicant (for BR only): SCHLUMBERGER SURENCO S.A. [PA/PA]; 8 Calle Aquilino de la Guardia, Panama City (PA).

[Continued on next page]

(54) Title: COMPACT DEVICE FOR MEASURING THE SPEED AND THE DIRECTION OF ROTATION OF AN OBJECT



(57) Abstract: The invention concerns a device for measuring the speed and direction of rotation of an object (3) near to which it is placed. It comprises: - a magnetic detection device (2) that delivers, in response to a rotation of the object (3) generating a magnetic field variation, signals representative of its speed and its direction of rotation, - a conductor (4) intended to be connected to a power source to supply current to the magnetic detection device (2) at least, - current receptor means (6) placed between the magnetic detection device (2) and the conductor (4) that create, from signals coming from said magnetic detection device (2), a modulation of the current (Iout) flowing in the conductor (4), said modulated current (Iout) reflecting both the speed and the direction of rotation of the object (3). Application particularly in the oil industry.